

○ DENOTES WING NUMBER

LIVE LOAD:

STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 #/S.F.

RATING BASED ON PLACEMENT OF 5 p.s.f. POLYMER OVERLAY
UNDER THIS CONTRACT.

CONCRETE MASONRY	SUPERSTRUCTURE (HPC DECK, PARAPET, DIAPHRAGM, APPROACH SLAB) _____	f'_c =	4,000 p.s.i.
	ALL OTHER (INCL. APPROACH SLAB FOOTING) _____	f'_c =	3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)	_____	f_y =	60,000 p.s.i.
STRUCTURAL CARBON STEEL ASTM A709 (GRADE 36)	_____	f_y =	36,000 p.s.i.
72W" PRESTRESSED GIRDER			
CONCRETE MASONRY	_____	f'_c =	8,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF	_____	f_u =	270,000 p.s.i.
STEEL PILING ASTM A252 (GRADE 3)	_____	f_y =	45,000 p.s.i.

ABUTMENTS TO BE SUPPORTED ON 10 $\frac{3}{4}$ " ϕ x 0.50" CIP CONCRETE PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 95'-0" AT SOUTH ABUTMENT, ESTIMATED LENGTH 105'-0" AT NORTH ABUTMENT.

*THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

I - 39 / 90 NB

A.A.D.T. = 60,400 (2020)
A.A.D.T. = 72,000 (2040)
R.D.S. = 70 M.P.H.

USH 12/18 WB

A.A.D.T. = 19,300 (2020)
A.A.D.T. = 24,400 (2040)
R.D.S. = 60 M.P.H.

USH 12/18 EB

A.A.D.T. = 46,300 (2020)
A.A.D.T. = 54,500 (2040)
R.D.S. = 60 M.P.H.

I-39/90 NB
PI STA. 2567'NB'+73.50
PC STA. 2564'NB'+23.65
PT STA. 2571'NB'+23.20
Δ = 2°49'58.77"
D = 0°24'17.91
R = 14,180.00'
T = 349.85'
L = 699.55'
S.E. = NORMAL CROWN

SINGLE SPAN - 72W" PRESTRESSED CONCRETE GIRDER BRIDGE

(NORMAL TO R OF USH 12/18 EB/WB)

1. PRELIMINARY PLAN
2. TYPICAL SECTIONS
3. QUANTITIES AND NOTES
4. TYPICAL SECTIONS AND PROFILES
5. SUBSURFACE EXPLORATION

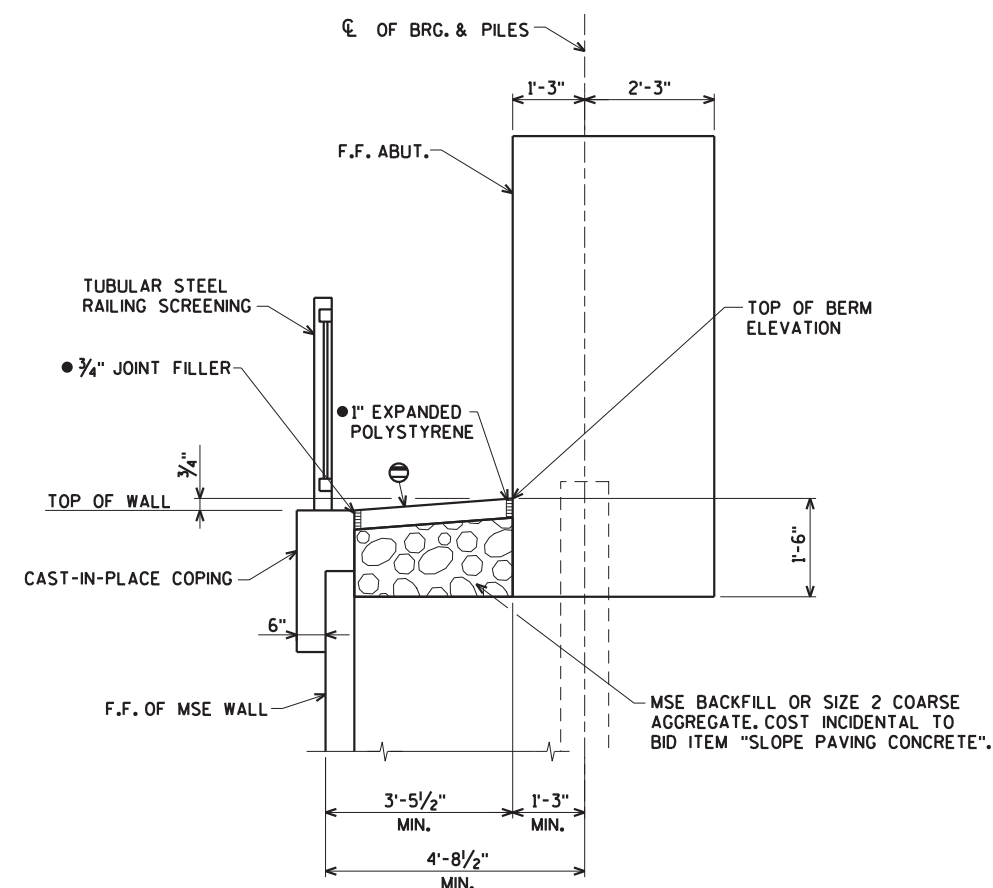
FOR TYPICAL SECTION
SEE SHEET 2

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

PRELIMINARY PLAN

SHEET 1 OF 5



(NORMAL TO ABUTMENT AND WALL)
 4" SLOPE PAVING CONCRETE

- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

F.F. DENOTES FRONT FACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-730			
		DRAWN BY JLB	PLANS CK'D.
TYPICAL SECTIONS		SHEET 2 OF 5	

\$PRNAME\$
V:\Structures-EC\41-0660.OX - IH-39 Dane Partners General Bridge Information\B-13-730 - 139.NB over USH 12&18 WB\bridge\prelim

STATE PROJECT NUMBER

1007-12-78

TOTAL ESTIMATED QUANTITIES

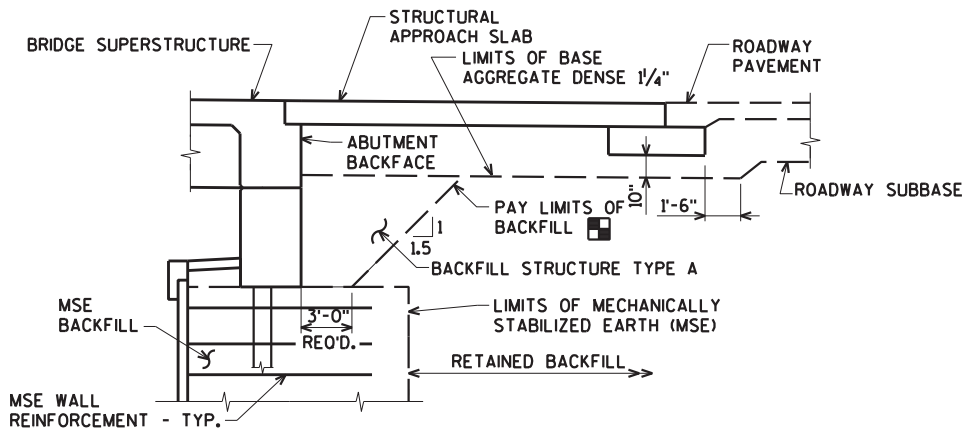
BID ITEM NUMBER	BID ITEMS	UNIT	S. STR. APR. SLAB	S. ABUT.	N. ABUT.	N. STR. APR. SLAB	SUPER.	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-13-730	LS	-----	-----	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-----			-----	-----	
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON		-----	-----		-----	
501.1000.S	ICE HOT WEATHER CONCRETING	LB						
502.0100	CONCRETE MASONRY BRIDGES	CY					-----	
502.3200	PROTECTIVE SURFACE TREATMENT	SY		-----	-----		-----	
502.3210	PIGMENTED SURFACE SEALER	SY		-----	-----			
503.0172	PRESTRESSED GIRDER TYPE I 72W-INCH	LF	-----	-----	-----	-----		
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-----			-----	-----	
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB						
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB		-----	-----		-----	
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----			-----	-----	
506.4000	STEEL DIAPHRAGMS B-13-730	EACH	-----	-----	-----	-----		
509.5100.S	POLYMER OVERLAY	SY	-----	-----	-----	-----		
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----			-----	-----	
517.1010.S	CONCRETE STAINING B-13-730	SF						
550.0500	PILE POINTS	EACH	-----			-----	-----	
550.2108	PIILING CIP 10 3/4 X 0.50-INCH	LF	-----			-----	-----	
604.0400	SLOPE PAVING CONCRETE	SY	-----			-----	-----	
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH		-----	-----		-----	
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF		-----	-----			
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF		-----	-----			
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	-----	-----	-----	-----		
SPV.0035.700	HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES	CY		-----	-----			
SPV.0165.700	LONGITUDINAL GROOVING BRIDGE DECK	SY		-----	-----		-----	
	NON-BID ITEMS	SIZE	-----	-----	-----	-----	-----	1/2" & 3/4"
	FILLER							

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II, OR III OR A.A.S.H.T.O. DESIGNATION M 213.
AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES.
"BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL.
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.
BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
POLYMER OVERLAY AND PIGMENTED SURFACE SEALER IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
THE RUSTICATIONS IN THE ABUTMENTS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".
THE RUSTICATIONS AT THE BACK FACE OF THE PARAPETS ARE INCLUDED IN THE BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES"
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.
DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

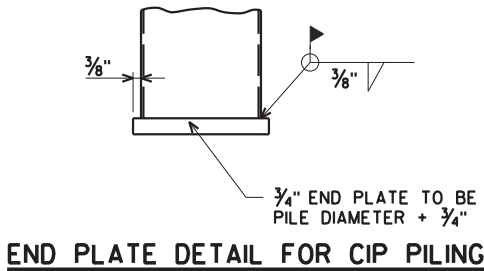
◆ HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES SHALL INCLUDE ALL SUPERSTRUCTURE CONCRETE AND ALL STRUCTURAL APPROACH SLAB CONCRETE, EXCEPT THE STRUCTURAL APPROACH SLAB FOOTING CONCRETE.

● PILING TO BE ASTM A252 (GRADE 3) WITH A f_y = 45,000 p.s.i.

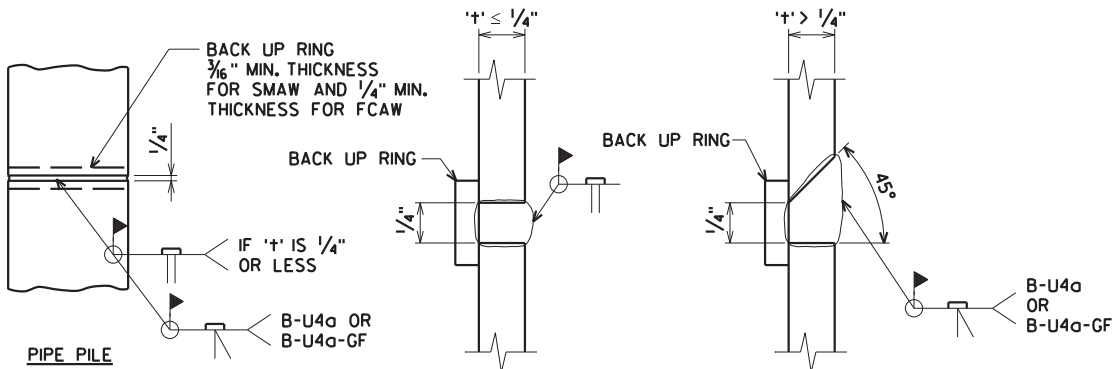


BACKFILL STRUCTURE LIMITS

■ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.



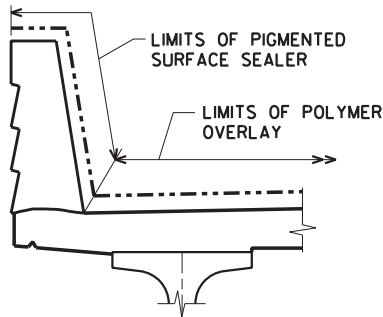
END PLATE DETAIL FOR CIP PILING



PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

CIP PILE WELD DETAIL



POLYMER OVERLAY AND PIGMENTED SURFACE SEALER DETAILS

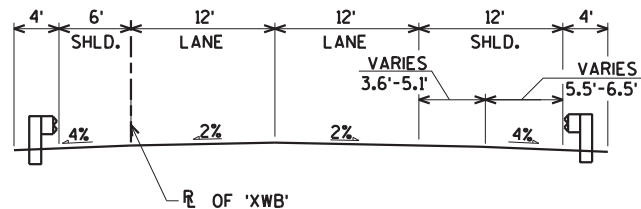
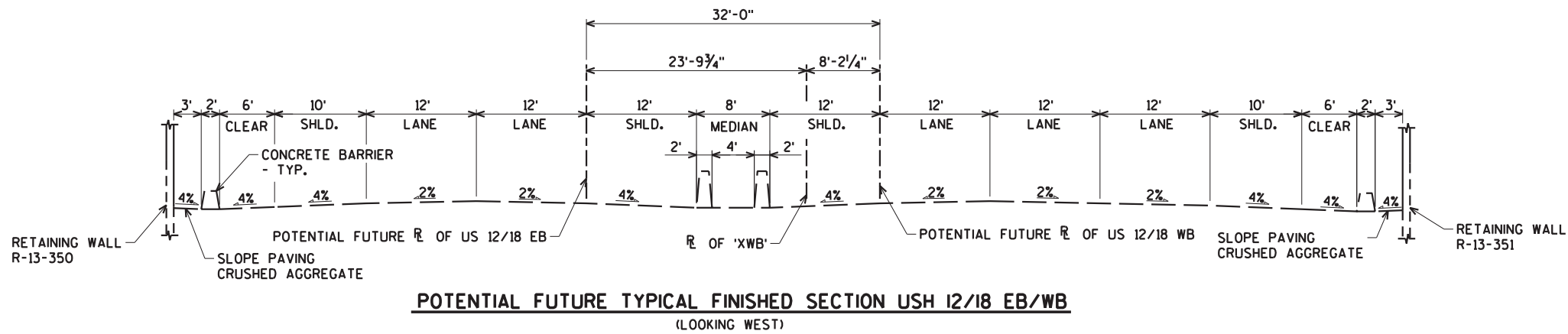
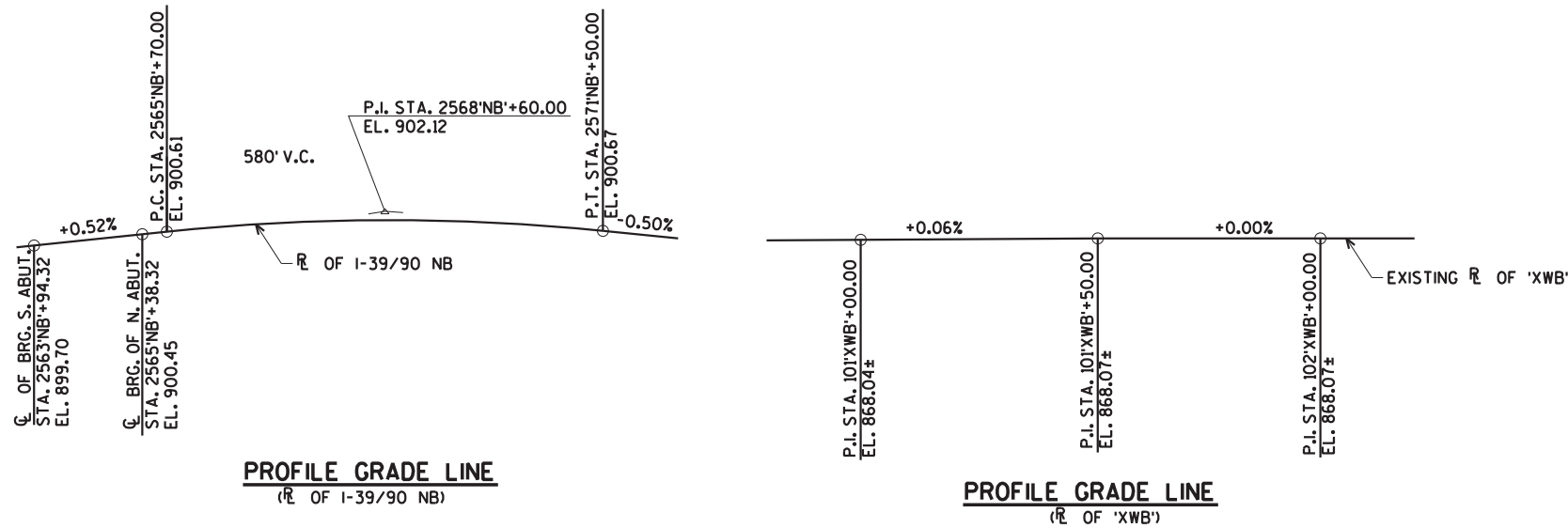
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STRUCTURE B-13-730			
DRAWN BY JLB		PLANS CK'D.	
QUANTITIES AND NOTES		SHEET 3 OF 5	

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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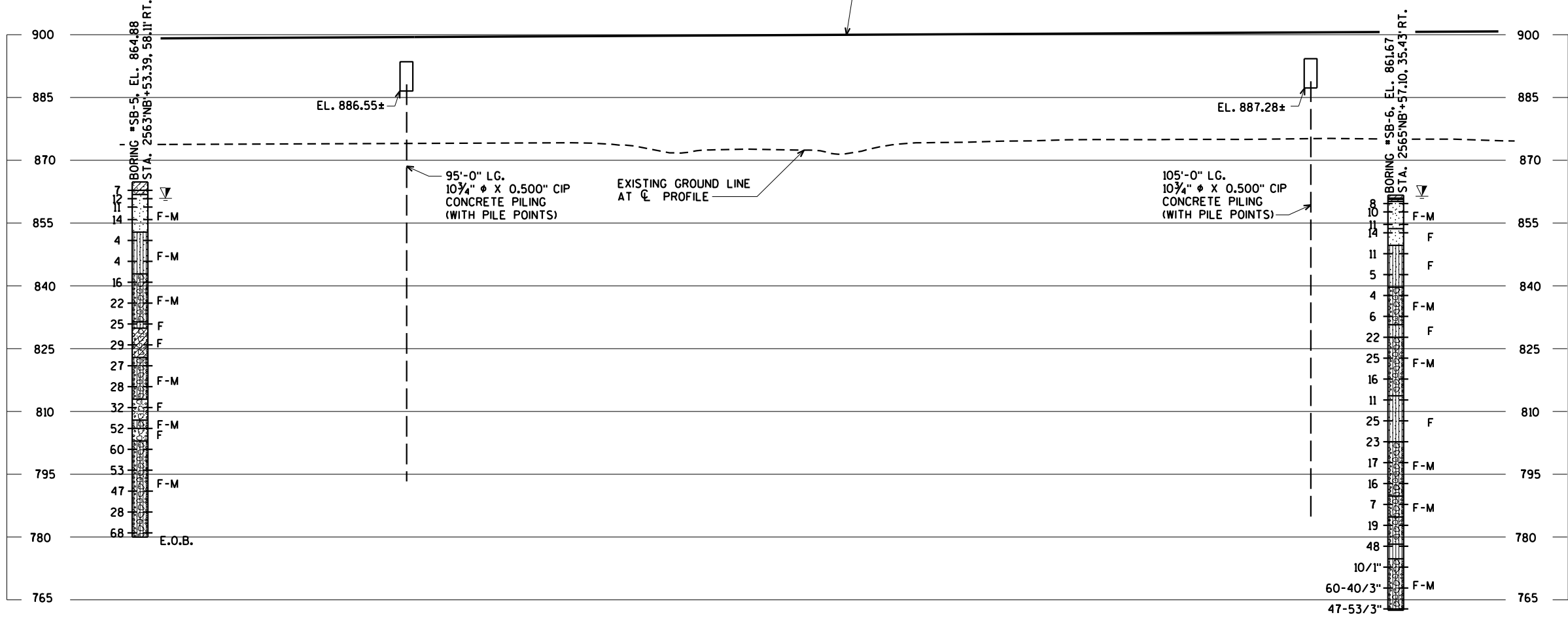
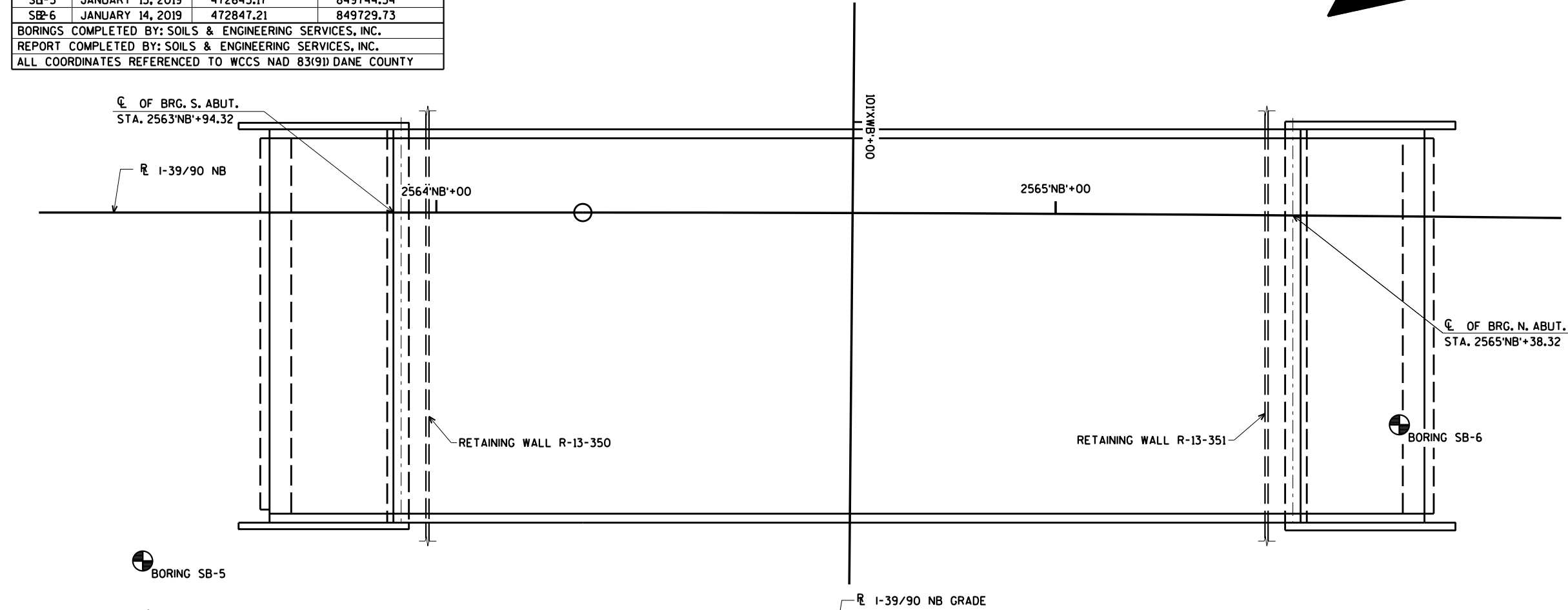
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DRAWN BY JLB		PLANS CK'D.	
TYPICAL SECTIONS AND PROFILES			SHEET 4 OF 5

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-5	JANUARY 15, 2019	472643.17	849744.34
SB-6	JANUARY 14, 2019	472847.21	849729.73
BORINGS COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			



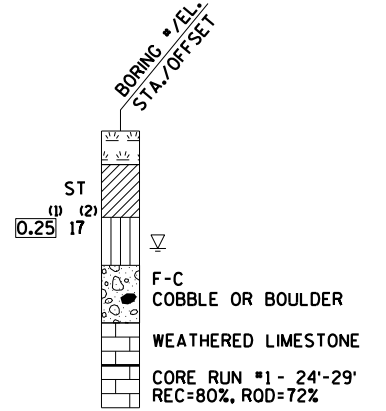
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MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▽ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

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NO.	DATE	REVISION	BY
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STRUCTURE B-13-730			
DRAWN BY CJM		PLANS CK'D.	
SUBSURFACE EXPLORATION			SHEET 5 OF 5